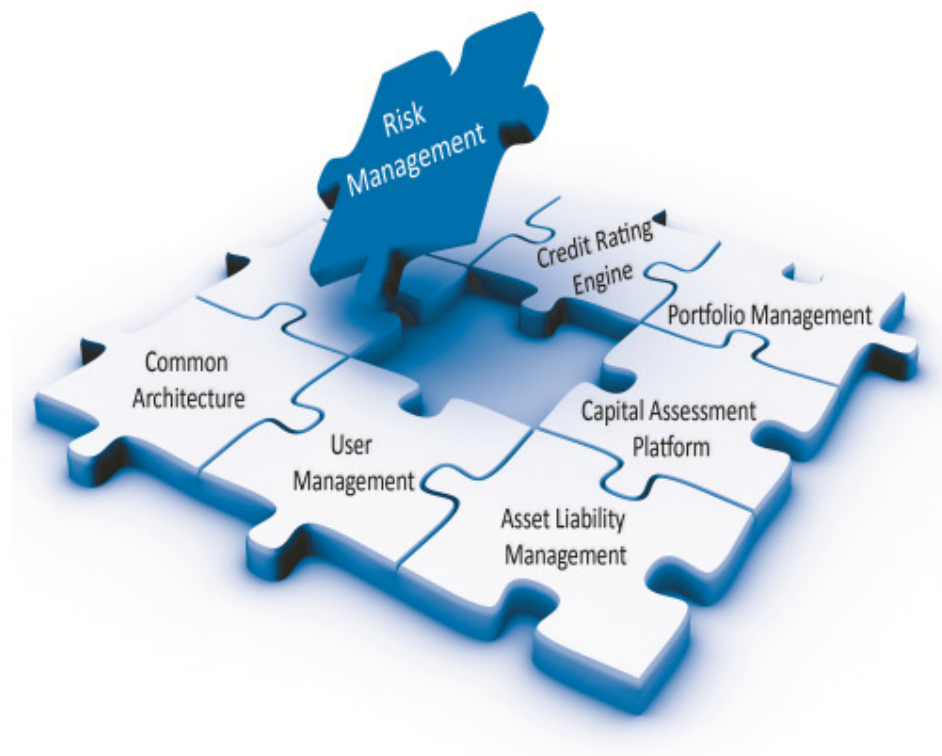


Case Study: Implementation of Credit Risk Engine

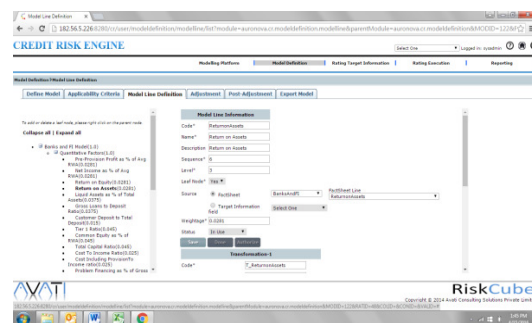


Client

Wholesale Bank based in Bahrain having exposures across various asset classes such as Sovereign, Banks and Corporates

Broad Scope

As part of the Risk projects roadmap, the Bank wanted to implement Credit Risk Rating Model within their credit approval process for existing & new customers related to Banking and Corporate exposures asset class. The scope included development of Master Rating Scale, development of Financial Institutions & Corporate Rating Models, Installation of models on Credit Risk Engine under RiskCube platform and configuration of approval process workflow and comprehensive MIS with rating reports, complete history of customer data and their internal / external risk ratings, rating migrations, process monitoring reports, rating review calendars, rating wise portfolio and industry reports – all these at customer & portfolio level covering on all asset classes.



Our Approach & Solution

To achieve project objectives we have developed two separate Financial Institutions and Corporate Credit Risk Rating Models for the Bank. The Rating Models were developed in compliance with guidelines mentioned in Basel II accord and related

Rating/Scoring Factor	Factor Response	Comments
DEBT SERVICE		
Total Bank Debt To EBITDA (Expressed as Ratio)	0.45	
Pre Tax Interest Coverage (Expressed as Ratio)	2.70	
EBITDA To Net Interest (Expressed as Ratio)	-0.34	
Debt Service Coverage (Expressed as Ratio)	0.66	
Free Cash Flow to 2x Debt Service Coverage Ratio (calculated as (EBITDA)(Interest Expense + Current Portion of Long Term Debt) (Expressed as Ratio)		
LIQUIDITY		
Net Loans To Total Assets (Expressed as Ratio)	0.05	
QUALITATIVE FACTORS		
MANAGEMENT QUALITY		
Performance to Advance Condition	A. Satisfactory	
Management Stability	B. Adequate Stability	
Commitment	A. Full Strong Commitment	
Integrity	A. Acceptable	
Strategy And Planning	B. Adequately prepared and articulated	
DEVELOP STRATEGY		
Having 1 to 10 of 10 entries	B. Adequate - Sufficiently defined and effective	

developments. Implementation of these models was done by configuring these models in Credit Risk Engine product module within RiskCube platform. All supporting information like Master Rating Scale, Adjustments, model and judgement over-rides, user defined customer and model applicability criteria was configured in Credit Risk Engine.

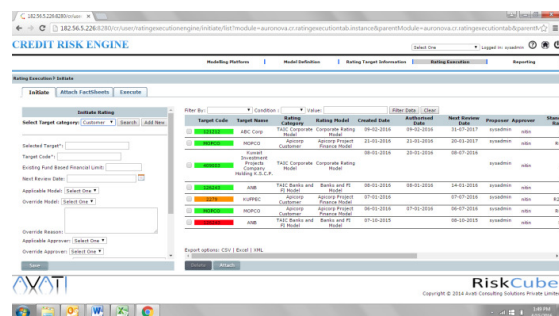
During start of the initiative, we developed a master rating scale for the Bank. As next step, FI and Corporate Rating Models were developed covering variety of quantitative (financial) & qualitative factors covering business, financial, industry, company and management specific factors. These models were thoroughly tested and calibrated in coordination with expert Business and Risk Teams and using customer data from existing portfolio.

Our flexible product platform ensured all credit risk evaluation rules and parameters were successfully configured and parametrized through easy-to-navigate front end screens. We were able to achieve complete and accurate automation of the credit risk evaluation and rating process to enhance efficiency and effectiveness of existing credit approval process. The Bank was able to automate and successfully capture all input, intermediate and final data fields for all customers, including historical data and archival process, leading to creation of critical and risk information for Risk Data Mart.



A thorough UAT was conducted UAT was successfully conducted by Business, Credit and Risk Management teams

Risk Management department covering all process, accuracy of output and MIS and for consistency and robustness of the platform. The results were fully reconciled to the General Ledger and Balance sheet information. The project was then successfully moved to production environment for day to day use and conduct of Credit Risk Ratings.



Business benefits

Significant business benefits were achieved post project implementation. Apart from implementing global benchmark best practices, the Bank was successful in complying with latest Basel guidelines related Rating model design, methodology, processes and operating environment. From a rudimentary basic judgmental process for credit evaluation, the Bank successfully moved to a rating model based credit decision making process in compliance with global benchmark and in line with leading global and regional institutions.

Additionally, Credit Risk Engine within RiskCube platform has helped the Bank successfully enhance its Risk Data Mart which has become the repository of critical customer and deal level risk data for conduct of future risk analytics and model validation exercise.

Demo Bank
Rating Distribution Report

Securities AS of 30 - 06 - 2015

Rating Scale	INTERNAL RATED			INTERNAL UNRATED BUT EXTERNALLY RATED			TOTAL				
	No. of Customers	Amount	% Amount	Rating Scale	No. of Customers	Amount	% Amount	Rating Scale	No. of Customers	Amount	% Amount
1	0	0	0.00	1	0	0	0.00	1	0	0	0.00
2	0	0	0.00	2+	0	0	0.00	2+	0	0	0.00
3	0	0	0.00	3	1	9,227,194	1.66	3	1	9,227,194	1.67
3+	0	0	0.00	3+	0	0	0.00	3+	0	0	0.00
4	0	0	0.00	4	13	137,696,044	26.16	4	13	137,696,044	26.03
4+	0	0	0.00	4+	8	26,635,529	5.00	4+	8	26,635,529	5.19
5	0	0	0.00	5	1	6,146,120	1.15	5	1	6,146,120	1.18
5+	1	10,627,700	50.83	5+	0	0	0.00	5+	1	10,627,700	1.91
6	0	0	0.00	6	1	14,907,900	2.82	6	1	14,907,900	2.83
6+	0	0	0.00	6+	12	156,126,747	31.61	6+	12	156,126,747	31.87
7	0	0	0.00	7	8	88,394,710	14.40	7	8	88,394,710	12.40
7+	0	0	0.00	7+	1	13,699,762	2.59	7+	1	13,699,762	2.52
8											
8+											
9											
9+											
10											
10+											
Total											

Demo Bank
Customer Rating Position
As Of Date - 21 - 01 - 2016

Used By: Sys

S.NO	Customer Number	Customer Name	Financials Date	Internal Rating	Rating Date	External Rating	External Rating Date	Rating Agency	Rating Officer	Next Review Date	Branch	NPA
1	12043	ANB	07-01-2016	4+	08-01-2016				Nish	14-01-2016	NO	NO
2	40003	Fubail Investment Private Company	07-01-2016	5	20-01-2016				Nish	08-07-2016	NO	NO